

IN THE CLAIMS

Kindly withdraw claims 6 and 7.

Claim 1. (original): A micro-dispensing nozzle comprising:

a housing with at least one exit orifice;  
a magnetostrictive valve in proximity to said orifice,  
said magnetostrictive valve having an open state and a  
closed state;

a means for applying a magnetic field to said  
magnetostrictive valve, said magnetostrictive valve  
changing shape in response to said magnetic field,  
said changing shape causing said orifice to change  
states.

Claim 2. (original): The magnetostrictive dispensing nozzle  
of claim 1 wherein said magnetostrictive valve contains a  
magnetostrictive rod.

Claim 3. (original): The magnetostriictive dispensing nozzle of claim 2 wherein said magnetostriictive rod lengthens under application of a magnetic field.

Claim 4. (original): The magnetostriictive dispensing nozzle of claim 3 wherein said magnetostriictive rod is held in a pre-extended state by a bias magnetic field.

Claim 5. (original): The magnetostriictive dispensing nozzle of claim 4 wherein said pre-extended state of said magnetostriictive rod is relaxed upon application of a control magnetic field, whereby said rod contracts upon application of said control magnetic field causing said orifice to open.

Claims 6-7 (withdrawn).

Claim 8. (original): The magnetostriictive dispensing nozzle of claim 1 wherein said housing contains an entrance orifice, said entrance orifice coupled to a precision pump.

Claim 9. (original): The magnetostriictive dispensing nozzle of claim 1 wherein said means for applying a

magnetic field is a magnetic field coil exterior to said housing.

Claim 10. (original): A magnetostrictive valve to control pico-liter flow from a fluid containing housing said valve comprising a magnetostrictive rod extending into an exit orifice of said housing, said valve being extended to close said exit orifice by a bias magnetic field, said rod responding to an applied control magnetic field to contract allowing said exit orifice to open.

Claim 11. (original): The magnetostrictive valve of claim 10 wherein said rod is around 2 mm in diameter.

Claim 12. (original): The magnetostrictive valve of claim 10 wherein said rod is around 30 mm in length.

Claim 13. (original): The magnetostrictive valve of claim 10 wherein said bias magnetic field is supplied by a permanent magnetic.

Claim 14. (original): The magnetostriictive valve of claim 10 wherein said magnetostriictive rod is operated faster than 1 kHz.

Claim 15. (original): A magnetostriictive valve method comprising the steps of:

placing a piece of magnetostriictive material in proximity to an exit orifice of a fluid containing housing;

maintaining pressure on fluid in said fluid containing housing;

applying a magnetic field to said magnetostriictive material to cause said magnetostriictive material to change shape, whereby said exit orifice is blocked or un-blocked according to said magnetic field.

Claim 16. (original): The magnetostriictive valve method of claim 15 wherein said magnetostriictive material is a magnetostriictive rod.

Claim 17. (original): The magnetostriictive valve method of claim 16 further comprising the step of pre-extending said magnetostriictive rod with a bias magnetic field.

Claim 18. (original): The magnetostriictive valve method of claim 17 wherein said bias magnetic field is supplied from a permanent magnet.

Claim 19. (original): The magnetostriictive valve method of claim 15 wherein said pressure is maintained by a precision pump.

Claim 20. (original): The magnetostriictive valve method of claim 19 wherein controlling of said pump and controlling of applying said magnetic field is by a processor.